



California Regional Water Quality Control Board

Santa Ana Region



Winston H. Hickox
Secretary for
Environmental
Protection

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Gray Davis
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October 24, 2002

Lieutenant General Robert B. Flowers, Commanding
HQ US Army Corps of Engineers
ATTN: CECG
441 G Street, NW
Washington, DC 20314-1000

Colonel Richard G. Thompson, Commanding
U.S. Army Corps of Engineers
Los Angeles District
911 Wilshire Blvd.
Los Angeles, CA 90017-3401

DIRECTIVE TO SUBMIT A WORK PLAN AND CONDUCT PERCHLORATE INVESTIGATION IN THE VICINITY OF THE FORMER RIALTO AMMUNITIONS STORAGE POINT, CITY OF RIALTO, SAN BERNARDINO COUNTY, CALIFORNIA

Dear Lt. Gen. Flowers and Col. Thompson:

As you are probably aware, perchlorate has been detected in municipal water supply wells in the Rialto, Colton and Chino Groundwater Subbasins in San Bernardino County, California. These water supply wells are located downgradient of the former Rialto Ammunitions Storage Point (RASP). The RASP was a U.S. Army facility, used from 1941 to 1945 for the storage and testing of ordnance and explosives. The site consisted of more than 2,000 acres, and was outfitted with a network of railroad tracks, berm-enclosed sidings, and reinforced bunker buildings. After World War II, portions of the former RASP facility and the former bunkers were occupied or used by federal defense contractors, who developed and tested photo-flash cartridges, illuminating mortar shells (the West Coast Loading Corporation - Kwikset Defense Products Division) and solid rocket propellant (B.F. Goodrich and Aerojet, a subsidiary of GenCorp).

Perchlorate salts are common constituents in explosives and ordnance. Furthermore, information that the Kwikset Corporation and Rialto-area businesses provided to us in response to subpoenas indicates that perchlorate salts were imported, stored, and used in association with the activities of federal defense contractors on the former RASP site and the storage bunkers. This letter sets forth a requirement under California Water Code Section 13267 that the U.S. Army Corps of Engineers conduct an investigation to define the lateral and vertical extent of perchlorate in soil and groundwater in the vicinity of the former RASP facility and the former bunkers, areas that were used by the U.S. Army (Department of Ordnance) to store and mobilize ammunition and high explosives. As required by that provision, this letter contains an explanation of the need for the investigation, and cites evidence supporting the requirement.

California Environmental Protection Agency



Background

Perchlorate contamination was first detected in groundwater in the Rialto, Colton and Chino Subbasins in 1997. At that time, the California Department of Health Services (DHS) Action Level (AL) for perchlorate in drinking water was 18 parts per billion (ppb). Two wells had perchlorate levels exceeding 18 ppb and were shut down. In January 2002, the DHS lowered the AL to 4 ppb. In response to the reduced AL for perchlorate, the local water purveyors in the Rialto, Colton and Chino Groundwater Subbasins restricted or eliminated the use of additional production wells with perchlorate concentrations that exceeded 4 ppb. Between 1997 and the present, various suspected perchlorate dischargers, including the former RASP and the U.S. Army's ordnance storage bunkers, have been identified.

Requirement for an Investigation

The Regional Board has directed staff to issue individual letters under California Water Code Section 13267 to suspected perchlorate dischargers. The Board also expressed a strong desire that suspected perchlorate dischargers work with the local water purveyors to provide a supply of replacement water during the loss or limited use of their production wells.

The Need for the Investigation

The Santa Ana Regional Water Quality Control Board is charged with the protection of water quality in this Region. We have been working actively with the water purveyors for several years to identify the extent and address the impact of perchlorate contamination on water resources in the Rialto, Colton and Chino Groundwater Subbasins. The water purveyors whose wells have been contaminated with perchlorate now face a state of emergency, and may not be able to provide an adequate water supply to their customers. It is urgent that the sources of the contamination be identified, and the magnitude of the perchlorate plume defined.

Evidence Supporting the Need for the Investigation

Enclosed as attachments are the following documents:

1. Attachment 1 – Well Location Map, showing perchlorate contamination in municipal water supply wells.
2. Attachment 2 – Defense Environmental Restoration Program, Formerly Used Defense Sites (FUDS) Findings and Determination of Eligibility for Site No. JO9CA057200.
3. Attachment 3 – Defense Environmental Restoration Program for FUDS Archives Search Report, Historical Analysis of Ordnance and Explosive Waste/Chemical Warfare Materials Activities.
4. Attachment 4 – Map of Ammunitions Storage Area Layout.

The evidence indicates that the U.S. Department of the Army constructed storage "igloos" and concrete underground bunkers for storing fuse and powder magazines, explosives and ordnance, which are likely to have contained perchlorate salts. The former bunkers were also used by federal defense contractors for storage of propellant and oxidizers, including perchlorate salts. Perchlorate has been detected in groundwater downgradient of the former RASP and the storage bunker area. Based on the evidence, the U.S. Department of the Army is suspected of having discharged perchlorate waste that has adversely affected water quality. This evidence supports the requirement for an investigation, as defined in Section 13267(b)(1) of the California Water Code.



Deadlines

1. A work plan for soil and groundwater investigation for perchlorate in the vicinity of the former RASP facility and the former ordnance storage bunkers must be submitted to Board staff by November 25, 2002. The work plan will be subject to my approval.
2. The investigation must commence within 30 days of approval.
3. All analytical results, groundwater measurements, and field information are to be submitted by fax to Board staff within 24 hours of being generated, throughout all stages of work, and during all phases of the investigation. The office fax number to be used for your data transmittals is (909) 781-6288.
4. The final report for this soil and groundwater investigation, including (at a minimum) the borehole logs, well construction details, groundwater elevation data, and soil and groundwater analytical results, must be submitted to Board staff within 30 days of completing the field work.

Failure to submit the required information by the specified deadline will subject you to administrative civil liability in the amount of up to \$1,000 per day pursuant to Section 13268(a) and (b) of the California Water Code.

The impact of perchlorate pollution on the local water supply in the Rialto, Colton and Chino Groundwater Subbasins, as a result of the historical activities of the DoD and its contractors at the former RASP site is of critical importance. Therefore, we ask that the U.S. Army Corps of Engineers take immediate action to review and reprioritize the ranking and status of the former RASP facility to augment the funding allocation and address this site as an emergency priority under the "Formerly Used Defense Site" (FUDS) program or other available funding mechanisms.

Finally, please be aware that the Board has directed staff to explore alternative ways of solving the water supply problem in the Rialto, Colton and Chino Groundwater Subbasins. In addition, consistent with the Board's direction, we will be issuing similar directives to a number of other suspected dischargers who have operated in the North Rialto area. Thus, there may be opportunities to cooperate with other entities to implement joint investigations or to propose solutions that would address the water supply problem. In fact, we believe it would be both scientifically effective and economically efficient for the suspected dischargers subject to these directives to jointly pursue the investigation and to explore water supply replacement options. Further, consistent with the Board's direction, we recommend that the joint efforts of the suspected dischargers consider both the characterization of the plume and initiation of water supply replacement or treatment strategies. Board staff has experience in managing similar joint investigations and cooperative solutions and we are available to discuss these further with you. If you are interested in discussing alternative options for complying with this directive, please contact us to arrange a meeting.

If you have any questions about this letter, please contact Kamron Saremi at (909) 782-4303, or you may call Ann Sturdivant, Chief of our Spills, Leaks, Investigations and Cleanups Section, at (909) 782-4904.

Sincerely,

Gerard J. Thibeault
Executive Officer

California Environmental Protection Agency



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Attachments:

1. Well Location Map, showing perchlorate contamination in municipal water supply wells.
2. Defense Environmental Restoration Program Formerly Used Defense Sites (FUDS) Findings and Determination of Eligibility for Site No. JO9CA057200.
3. Defense Environmental Restoration Program for FUDS Archives Search Report, Historical Analysis of Ordnance and Explosive Waste//Chemical Warfare Materials Activities.
4. Map of Ammunitions Storage Area Layout.
5. Inland Empire Perchlorate Regulatory Task Force Mailing List.

cc w/attachments:

Debra Castens, U.S. Army Corps of Engineers, Los Angeles District
Allen Curlee, Office of the District Counsel, U.S. Army Corps of Engineers, Sacramento

cc w/out attachments:

Regional Board
Jorge Leon, Office of Chief Counsel, SWRCB
Ken Miller, County of San Bernardino Department of Public Works
Dan Coyle - Downey Brand Seymour & Rohwer, LLP, representing American
Promotional Events – West, Inc.
Peter Duchesneau - Manatt, Phelps & Philips, representing Goodrich Corporation
Chris Conley, GenCorp, Sacramento
Charles Whisonant, representing Denova Environmental
Bruce Cash, United Strategies, Inc., consultant for Pyro Spectaculars by Souza
Jerry Vincent, U. S. Army Corps of Engineers, Sacramento District
Inland Empire Perchlorate Regulatory Task Force (mailing list attached)

AES/Data/SLIC/Rialto perchlorate01-02/13267/DoD

